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1.7 Million Pounds of e-Waste Recycled

The Authority offers a contract for permanent electronic recycling for our member jurisdictions to use at any time. Four jurisdictions are now using this contract: Anne Arundel County, Baltimore City, Carroll County and Frederick County. The results have been astounding in the short time the collection facilities have been in place. With thousands of computers becoming obsolete each year, the Authority expects eCycling will continue to increase. The table below lists the amount of electronics material recycled for each jurisdiction.



The federal government is also doing its part to keep electronic material (computers, televisions, printers, cell phones,

etc.) out of landfills. Last year, 34 million pounds of electronics were recycled under the EPA's Plug-In To eCycling program. This voluntary program partners with the electronic industry to offer consumers opportunities to recycle used electronics. Since its inception in 2003, the program has recovered more than 95 million pounds of electronics.

For more information on the EPA's program, visit www.epa.gov/plugin. Information on electronics recycling in Maryland can be obtained by visiting the Authority's recycling website, www.mdrecycles.org. For information on the Authority's eCycling contract, call 410-333-2730.

Total Tons of Electronic Material Recycled Per Jurisdiction in 2006

Jurisdiction	Amount of Material (pounds)
Anne Arundel County (June-Dec.) *	680,240
Baltimore City	524,320
Carroll County (2005)	362,680
Frederick County (May-Dec.) *	188,180
Total	1,755,420

* Contracts started mid-year

Landfill Seminar

On April 24th, SCS Engineers held their 5th Annual Landfill Seminar in Baltimore. The seminar provided an opportunity to network with other industry professionals and hear about projects, as well as problems and successes, in Virginia, DC, and Maryland. Topics discussed included landfill liner trends, leachate treatment, and landfill drainage

systems. A regulatory update and economic development information for landfill gas were also presented. Participants heard about "green" buildings and how they are a great fit for energy from landfills, and the seminar closed with an overview of landfill challenges over the years.

Authority Researches European Technologies

In late March, representatives of the Authority participated in a seven-day tour to investigate state-of-the-art waste management practices of several European countries and the European Union. Authority staff, several board members and an elected official from Frederick County participated in the tour.

The Authority is in the middle of procuring waste-to-energy facilities for Carroll, Frederick and Harford Counties. The tour group wanted to learn how Europeans have integrated waste-to-energy into their solid waste management system, and observe the technological advances that have been made since the 1995 completion of the Montgomery County waste-to-energy facility – one of the last green field waste-to-energy facilities built in the United States.

The ambitious tour covered seven countries in seven days and included stops at many waste-to-energy, compost and recycling facilities. In addition, the group met with the International Solid Waste Association, the Confederation of European Waste-to-Energy Plants and the Swedish Waste Association.

The Europeans tend to look at solid waste as a resource that should be recycled or recovered for energy production, and they view landfilling as the last

resort. Europeans recycle 45 percent of their waste, incinerate 45 percent for energy, and landfill the remaining 10 percent. Denmark and Sweden, which consider waste-to-energy as a form of recycling, have recycling rates of more than 90 percent.

One of the highlights of the tour was visiting the Isseane waste-to-energy facility under construction in downtown Paris on the Seine River. There is a stunning view of the Eiffel Tower (1.5 miles away) from the facility. Because of the facility's location and the desire for it to blend in with the surrounding city, two-thirds of the facility is being built underground. The green roof makes the building look more like a park than an industrial building.

Two Frederick County officials – Michael Marschner, director of the Division of Utilities and Solid Waste Management, and David Gray, vice president of the Board of County Commissioners – presented the trip's findings to the County

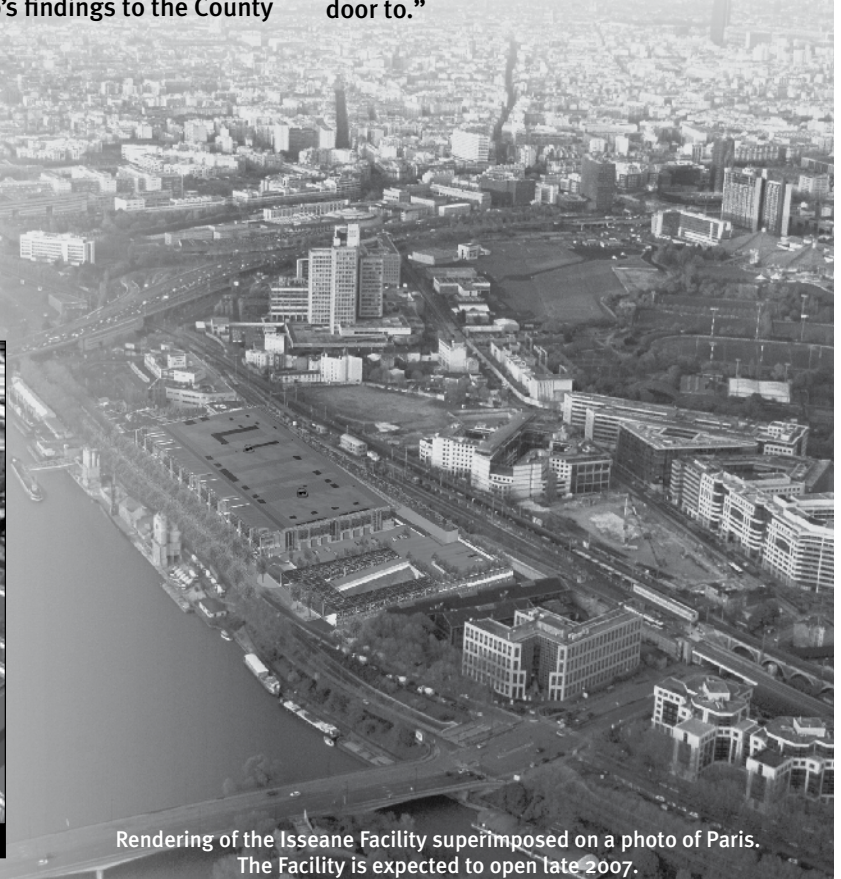


HVC Incinerator Outside of Amsterdam

Commissioners. “In Europe, the waste management philosophy is to take care of your waste today, not leave it to future generations,” Marschner said. Jorgen Haukohl and Bettina Kanuk from Denmark contributed to the briefing. “The decision was made in Denmark not to use landfills in order to protect groundwater sources.” Europeans are also concerned about landfills because of the methane gas produced by active landfills. It’s about 20 times more potent than carbon dioxide and is a factor in global warming. “I was very impressed,” Gray said. “It looks like a place you wouldn’t mind living next door to.”



Artist's Rendering of the Isseane Facility



Rendering of the Isseane Facility superimposed on a photo of Paris. The Facility is expected to open late 2007.

Waste-to-Energy and Recycling in Germany

Solid waste management issues are difficult for elected officials to face. For decades, government at all levels has struggled with the delicate balance of an increasing population's waste generation and the unpopular decision to increase landfill capacity.

But Americans are not alone in this struggle. Governments all over the globe are facing the same public debate. And with the heightened awareness of the impact of landfill gases on global warming, political and environmental pressure is greater than ever.

On June 1, 2005, the German government banned the landfilling of untreated biodegradable matter and municipal solid waste (MSW) containing organics. After centuries of burying waste in unlined landfills, the German government conducted a series of comprehensive studies that determined these practices were responsible for soil, surface and groundwater contamination and odor. Plus, the resulting methane gas emissions were shown to cause 25 percent of Germany's greenhouse gas emissions, a leading cause of global warming.

The initial regulations of the Technical Instructions on Waste from Human Settlements and the Waste Storage Ordinance placed the responsibility on local governments. After nearly a decade of appeals and exemptions granted to avoid the cost of facility and operational modifications to treat MSW prior to disposal, in 2001 the German government amended the legislation to transfer the responsibility of compliance from local government to waste generators and landfill owners and operators. As of June 1, 2005, all landfills are compliant and no further exemptions have been granted.

The approximately 45 percent of waste left over after recycling is combusted to produce energy, hot water, steam or electricity.

How do you say "flow control" in German? Not unlike our recent legal debate, the Germans also face this issue. To circumvent the mandates and avoid the construction of pre-treatment facilities, German landfill owners began exporting waste to neighbor-



Rügenberger Damm waste incineration plant, with slag treatment, Hamburg (Photo: MVA Rügenberger Damm, Hamburg)

ing countries. The German government responded by amending their previous legislation to ban or severely restrict waste exportation.

So, what are the results of these initiatives? The Federal Environment Agency reports that waste generation in Germany has changed little since 1990: about 340 million tons per year. However, MSW recovery and recycling has increased dramatically. In 1990, the recovery rate was 15 percent. In 2001, after the legislation was enacted, it reached a remarkable 50 percent. By 2004, it increased even more to 57 percent.

Landfill gas emissions have fallen by about two-thirds from 1.5 million tons in 1990 to 0.5 tons in 2004. This represents a reduction of approximately 21 million tons of CO₂. By the end of 2007, Germany will have 138 WTE facilities in operation. German officials predict an additional reduction of 3.7 million tons of CO₂ when the WTE facilities are operational and the landfills are closed.

The initiative began in the early 1990's with the closure of all non-compliant landfills. In 1990, 8,273 municipal landfills were active in Germany. In 2000, that number dramatically decreased to 333. Traditional incinerators were converted to highly-efficient, energy-producing waste-to-energy (WTE) facilities. Metals were recovered for recycling, scrubbers were installed to reduce emissions, and heat and electric power were produced.

The German government looks optimistically to the future. Advanced sorting technology and increased collection of recyclables, a new Commercial Waste Ordinance which governs the management of commercial waste, the Waste Wood Ordinance and the construction of several WTE plants will all contribute to Germany's efforts to reduce the volume of landfilled waste, improve WTE and recycling technology, and make a significant contribution to the reduction of greenhouse gases.

One thing is certain: there is no turning back. Acting in unison, the federal and Lander authorities, the municipal and private-sector waste management industry and the industry federations have achieved a successful waste management system.

Wheelabrator Baltimore Employees Hit a VPP 'Star' Home Run

Oriole Park at Camden Yards has hosted its share of stars and local dignitaries. But on May 17 it was the site of a lunch reception to celebrate the 2007 recipient of the Maryland Occupational Safety and Health Administration (MOSH), and the Occupational Safety and Health Administration (OSHA) "Star" status award for the Voluntary Protection Program (VPP).

Wheelabrator Baltimore's waste-to-energy facility and its employees were honored with this prestigious award. The plant, located a few blocks from Oriole Park at Camden Yards and M&T Bank Stadium, provides dependable, environmentally-safe disposal of 2,250 tons of municipal solid waste each day for Baltimore City and Baltimore County, while generating up to 60,000 kilowatts of electrical energy – enough to power 68,000 homes.

The VPP Program recognizes employees and employers who demonstrate outstanding and effective health and

safety systems and processes. The Star designation is the highest level attainable through the VPP Program. Of the 7 million worksites monitored by federal and state programs throughout the U.S., only seven have achieved the VPP Star status in Maryland.

"The VPP Star distinction means that the employees of our facility voluntarily achieved a level of safety excellence rare in this country," said Christopher Leyen, Wheelabrator Baltimore plant manager. "VPP Star is the highest health and safety honor that an industrial facility can achieve, and we are extremely proud to be receiving this recognition."

To qualify for Star status, a worksite must maintain a three-year injury rate below the industry average, and must demonstrate safety programs that greatly exceed MOSH standards.

After the luncheon, Wheelabrator employees joined state and federal

officials for a flag raising ceremony at the plant. J. Ronald DeJuliis of the Maryland Commission of Labor and Industry, presented the official VPP Star certificate and flag to the employees and staff of the Wheelabrator facility.

Other speakers included City Councilwoman Sharon Green Middleton, Mark Weidman, president of Wheelabrator Technologies, Christopher Leyen, plant manager, and Robin B. Davidov, executive director of the Northeast Maryland Waste Disposal Authority.



Wheelabrator's BRESO Employees with their VPP Flag from the Ceremony



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